

## Designer Planes

### Algebraic Equations Review:

*Show all steps when solving the equations.*

1.) Given  $A = \frac{1}{2}bh$  solve for  $b$

2.) Given  $d = rt$  solve for  $t$

3.) Given  $y = mx + b$  solve for  $m$

4.) Given  $Ax + By = C$  solve for  $y$

5.) Given  $A = \pi r^2$  solve for  $\pi$

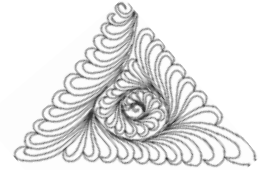
6.) Given  $P = 2L + 2W$  solve for  $W$

7.) Given  $A = LW$  solve for  $L$

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### Part 03:

Show all steps when solving the equations.



### Calculating the Area of your Wings:

*Triangular-Shaped Wings:* Calculate the area of triangular-shaped wings, known as "delta wings," the same way you would figure the area of a triangle. Multiply the combined length of the wings by the width of the wing as measured against the fuselage. Divide the result in half to obtain the area.

<p><i>Appropriate formula:</i></p>     	<p><i>Solution:</i></p>     
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### Notes:

Calculating Speed, Distance & Time

$\text{speed} = \frac{\text{distance}}{\text{time}}$ $\text{distance} = \text{speed} \times \text{time}$ $\text{time} = \frac{\text{distance}}{\text{speed}}$	
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**Calculating Speed, Distance & Time**

$speed = \frac{distance}{time}$	$distance = speed \times time$	$time = \frac{distance}{speed}$
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Determine the average speed of your original plane.

Find the average distance (*cm*) travelled by your original plane.

$$(d_1 + d_2 + d_3 + d_4 + d_5) \div 5 =$$

Find the average time (*s*) travelled by your original plane.

$$(t_1 + t_2 + t_3 + t_4 + t_5) \div 5 =$$

Calculate the average speed of your plane in flight. (*cm/s*)

Determine the average speed of your modified plane.

Find the average distance (*cm*) travelled by your modified plane.

$$(d_1 + d_2 + d_3 + d_4 + d_5) \div 5 =$$

Find the average time (*s*) travelled by your modified plane.

$$(t_1 + t_2 + t_3 + t_4 + t_5) \div 5 =$$

Calculate the average speed of your modified plane in flight. (*cm/s*)

Show data acquired during your flight tests using the grids below.

